A PRESENTATION

ON

EMERGENCY RESPONSE SYSTEMS

THE CANADIAN PERSPECTIVE

BY

LUIS RODRIGUEZ

OF

CANADA MORTGAGE AND HOUSING CORPORATION

AT THE

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EMERGENCY RESPONSE SERVICES

FOR

FRAIL PERSONS LIVING ALONE

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ABSTRACT

Significant socio-demographic changes have occurred in Canada over the last 35 years. These include: a rapid growth in the elderly population in general, and in particular in the number of people aged 75 and over; a decline in the proportion of children in the population as compared to that of the elderly population; decreases in family size; an increase in the participation of women in the labour force, and increased economic pressure on both husband and wife to work in order to meet family responsibilities; an increase in the number of single parent families and people living alone; significant improvements in life expectancies; and changes in people's attitudes towards many aspects of life.

These changes have implications for Canadians in the future. If current trends continue, there will be an increased need to maximize the effectiveness of available resources in order to address the needs for formal and informal support of older seniors and disabled persons.

From the information presented in this paper, it is apparent that most older seniors and disabled persons prefer to remain living independently in their homes for as long as possible, instead of moving into institutional environments. This is possible if they have the necessary support. It is also apparent that Emergency Response Systems (ERS) are playing, and will continue to play, an important role in enabling many seniors and disabled persons to maintain their independence.

Across Canada, the interest in effective and affordable ERS is growing rapidly, and a variety of innovative initiatives are emerging. Most of these initiatives combine the reassurance of emergency response systems with appropriate physical environments and accessibility to the necessary community based support services. The objective is to help older seniors and disabled persons remain living independently in their homes for as long as possible.

I AM PLEASED TO BE WITH YOU TODAY, BECAUSE I KNOW WE ALL SHARE A COMMON INTEREST IN EXPLORING WAYS OF HELPING OLDER PEOPLE, AND DISABLED PERSONS, MAINTAIN OR RESTORE THEIR INDEPENDENCE.

MY PRESENTATION WILL FOCUS ON THREE ASPECTS: FIRST, I WILL TALK ABOUT THE MOST SIGNIFICANT SOCIO-DEMOGRAPHIC CHANGES TAKING PLACE IN CANADA; SECOND, I WILL TELL YOU ABOUT MY OWN FINDINGS ON THE POTENTIAL OF EMERGENCY RESPONSE SYSTEMS (ERS); AND THIRD, I WILL INFORM YOU ABOUT THE MOST RECENT CANADIAN INITIATIVES RELATING TO EMERGENCY RESPONSE SERVICES.

CANADA IS EXPERIENCING UNPRECEDENTED DEMOGRAPHIC CHANGES. IT IS EXPECTED THAT THE SENIOR POPULATION [1] IN GENERAL, AND THE NUMBER OF PEOPLE AGED 75 AND OVER IN PARTICULAR, WILL INCREASE SIGNIFICANTLY OVER THE NEXT 40 YEARS. TODAY, JUST OVER ONE IN TEN CANADIANS IS A SENIOR CITIZEN. BY THE YEAR 2031 NEARLY ONE IN FOUR CANADIANS WILL BE 65 OR OLDER.

HOWEVER, WE FIND A MORE SIGNIFICANT CHANGE WHEN WE LOOK AT THE NUMBER OF OLDER SENIORS WHO ARE MOST LIKELY TO NEED SUPPORTIVE ENVIRONMENTS. TODAY 4% OF CANADIANS ARE 75 YEARS OF AGE OR MORE. BY THE YEAR 2031, WHEN THE BABY BOOM GENERATION [2] MOVES FULLY INTO THE SENIORS RANKS, THERE WILL BE AS MANY PEOPLE IN THE 75 PLUS AGE GROUP AS THERE ARE OVER 65 TODAY. IF PREVAILING TRENDS CONTINUE OVER THE NEXT 40 YEARS, THE 85 PLUS AGE GROUP WILL TRIPLE FROM ONE-QUARTER OF A MILLION, IN 1986, TO THREE-QUARTERS OF A MILLION IN THE YEAR 2031. [3]

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[1] Arbitrarily for this presentation, the senior population is defined as all persons aged 65 and over. People aged 75 years and over are defined as older seniors.

[2] Those born between 1946 and 1966, from "The Seniors Boom" by Statistics Canada, October 1986.

[3] "The Seniors Boom", by Statistics Canada, October 1986.

A MORE DRAMATIC PICTURE OF THE DEMOGRAPHIC CHANGES IN CANADA CAN BE SEEN WHEN WE COMPARE THE PROPORTION OF SENIORS TO THE PROPORTION OF PEOPLE BETWEEN 13 AND 19 YEARS OF AGE. IN 1971, THERE WERE ALMOST TWICE AS MANY TEENAGERS AS THERE WERE SENIORS. TODAY, THERE ARE AS MANY SENIORS AS THERE ARE TEENAGERS. IF CURRENT TRENDS CONTINUE, BY THE YEAR 2031 THERE WILL BE NEARLY 3 TIMES AS MANY SENIORS AS TEENAGERS. [4]

SHIFTS IN THE DEPENDENCY RATIOS WILL BE EXPERIENCED IN THE 1990'S. THE SOCIETY WILL BE A MATURE SOCIETY WITH A "BABY BOOM" GENERATION ENTERING ITS MIDDLE AGE, AND A GROWING NUMBER OF FAMILIES THAT WILL MORE LIKELY BE REQUIRED TO PROVIDE MORE CARE FOR THEIR ELDERLY PARENTS THAN FOR THEIR CHILDREN, OR POSSIBLE FOR BOTH. [5] THE GENERATION FOLLOWING THE BABY BOOMERS WILL CERTAINLY HAVE MORE OLDER PEOPLE TO LOOK AFTER. CONSEQUENTLY, MORE AND MORE CANADIAN WORKERS ARE LIKELY TO FACE THE CHALLENGE OF BALANCING WORK AND FAMILY RESPONSIBILITIES.

WE HAVE ALSO BEEN EXPERIENCING OVER THE PAST SEVERAL DECADES A SIGNIFICANT INCREASE IN THE PARTICIPATION OF WOMEN IN THE LABOUR FORCE [10]. THE PARTICIPATION RATE OF MARRIED WOMEN IN THE LABOUR FORCE ALONE INCREASED FROM 11.2% IN 1951, TO 56.9% IN 1986. [5] SINCE WOMEN HAVE TRADITIONALLY BEEN THE PRIMARY FAMILY CARE-GIVERS, IT IS REASONABLE TO ASSUME THAT THE SUBSTANTIAL INCREASE IN THEIR PARTICIPATING IN THE LABOUR FORCE MAY HAVE ALREADY RESULTED IN A GREATER NUMBER OF WORKERS WHO ARE LOOKING AFTER THEIR PARENTS OR GRAND-PARENTS. IT IS ALSO APPARENT THAT THE INCREASING INVOLVEMENT OF WOMEN IN THE LABOUR FORCE IS STARTING TO CREATE A VACUUM IN MANY COMMUNITY GROUPS THAT FOR MANY YEARS HAVE RELIED ON WOMEN VOLUNTEERS

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[4] Canadian population projections by Statistics Canada.

[5] Workers with Family Responsibilities in a Changing Society: Who Cares, by the Canada Employment and Immigration Advisory Council, June 1987.

TO PROVIDE SERVICES TO THE ELDERLY POPULATION [6].

THERE ARE OTHER SIGNIFICANT CHANGES TAKING PLACE IN CANADA. FOR EXAMPLE, THE FERTILITY RATE HAS BEEN DECLINING SINCE THE EARLY 1960's (3.9). IT IS NOW (1.7) WELL BELOW THE REQUIRED RATE TO MAINTAIN A STABLE POPULATION IN THE LONG RUN WITHOUT LARGE OFFSETTING INCREASES IN NET IMMIGRATION. [7]

DECLINES IN FERTILITY, COUPLED WITH AN INCREASE IN THE NUMBER OF LONE-PARENT FAMILIES, MOST OF WHICH ARE HEADED BY WOMEN [8], HAVE RESULTED IN A DECREASE IN THE AVERAGE FAMILY SIZE IN CANADA, FROM 3.9 PEOPLE IN EACH FAMILY IN 1961 TO 3.1 IN 1986. [9]

THE ECONOMIC NEED FOR BOTH WIFE AND HUSBAND TO WORK IN ORDER TO MEET THEIR FAMILY SUPPORT COMMITMENTS IS ON THE RISE. [5] IT IS ALSO APPARENT THAT GEOGRAPHIC MOBILITY AMONG ADULT CHILDREN WHO SEEK NEW OR BETTER JOB OPPORTUNITIES IS INCREASING. THESE TRENDS ARE LIKELY TO REDUCE THE TRADITIONAL RESOURCES FOR INFORMAL SUPPORT.

THE HEALTH OF CANADIANS HAS BEEN IMPROVING SIGNIFICANTLY OVER THE PAST 50 YEARS, AND AN INCREASINGLY POSITIVE ATTITUDE TOWARDS PHYSICAL FITNESS IS BEING REFLECTED IN THE OLDER AGE GROUPS. [3] PARTICULARLY IN RECENT YEARS, CANADIANS HAVE BEEN PAYING MORE ATTENTION TO PERSONAL HABITS WITH REGARD TO

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[6] From the article "Social Agencies Hit by Volunteer Shortage", the Ottawa Citizen, 19 May 1990

[7] Statistics Canada Lectures Series. Can We Afford an Aging Society ?, June 1989, by Ivan P. Fellegi, Chief Statistician of Canada.

[8] Canadian Social Trends by Statistics Canada - Winter 1987. Women Parenting Alone.

[9] Canadian Social Trends by Statistics Canada- Spring 1989. Changes in Living Arrangements, 1986 Census highlights.

[10] Canadian Social Trends by Statistics Canada- Winter 1987. Women in Male-dominated professions.

SMOKING, EXERCISING AND DIET. IF THESE TRENDS CONTINUE, OLDER CANADIANS COULD REMAIN HEALTHIER AND MORE ACTIVE TO A GREATER AGE.

THERE HAVE ALSO BEEN SIGNIFICANT GAINS IN LIFE EXPECTANCY, BOTH AT BIRTH AND AT THE OLDER AGES. ACCORDING TO THE LATEST ESTIMATES [11], BABY BOYS AND GIRLS BORN IN 1986 CAN EXPECT TO LIVE AN AVERAGE OF 73 AND 80 YEARS RESPECTIVELY. BY 1999, IT IS ESTIMATED THAT LIFE EXPECTANCIES OF MEN AND WOMEN WILL REACH CLOSE TO 75 AND 82 YEARS RESPECTIVELY. [12] CANADIANS ARE LIVING LONGER AND THIS IS LIKELY TO RESULT IN AN INCREASED NUMBER OF ADULT CHILDREN WITH OLDER ELDERLY PARENTS.

ACCORDING TO SOME AMERICAN STUDIES, GAINS IN LIFE EXPECTANCY HAVE ALSO ADDED TO THE YEARS DURING WHICH ELDERLY PEOPLE EXPERIENCE HEALTH PROBLEMS. CANADA CAN, THEREFORE, EXPECT SIGNIFICANT INCREASES IN THE NUMBER OF SENIORS WITH CHRONIC DISABILITIES. [13] THEY WILL HAVE SPECIAL NEEDS.

ONE OF THE FASTEST-GROWING GROUPS OF CANADIANS CONSISTS OF PEOPLE WHO LIVE ALONE. IN 1986, 25% OF PEOPLE AGED 65 AND OVER WERE LIVING ALONE (MORE THAN THREE-QUARTERS, 77%, OF THEM WERE WOMEN). IF EXISTING TRENDS CONTINUE, BY THE YEAR 2001, 35% OF CANADIANS AGED 75 AND OVER (±1,700,000) WILL BE LIVING ALONE, UP FROM 30% IN 1986. [14] LIVING ALONE IS THE BIGGEST RISK FACTOR THAT FORCES A FRAIL OR DISABLED ELDERLY PERSON TO MOVE INTO AN INSTITUTION. [13]

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[11] Demography Division, Statistics Canada.

[12] The Corporate Response to Workers with Family Responsibilities by the Conference Board of Canada Report 43-89, 1989.

[13] Conference Proceedings. Options: Housing for Older Canadians, Halifax, Nova Scotia, October 17-20, 1988. Canada Mortgage and Housing Corporation, "Implications of a Diverse and Changing Population".

[14] Canadian Social Trends by Statistics Canada, Autumn 1988, Living Arrangements of Canada's "Older Elderly Population".

In a 1986 national survey [15], 13 percent of Canadians reported some level of disability. Just over 45 percent of Canada's elderly population said they had some difficulty in carrying out one or more of the Activities of Daily Living (ADL). Most of these older Canadians now live in their own homes (renting or owning); however, the percentage living in private homes, decreases as they age. For example, while 96 percent of all disabled seniors between 65 and 69 years of age live in their own homes, only 57 percent of those over 85 live in private homes. Increasing limitations on their activities is one of the most important reasons why elderly people give up their homes to move into nursing homes or institutions.

Changing attitudes towards many aspects of life is another significant development in our society. Many speakers at a recent international conference held in Canada [16] reported that many frail elderly people and disabled persons would prefer to live independently in their own homes for as long as possible. At a more recent provincial conference [17], it was noted that seniors want to be self-supportive, and that they want to improve their opportunities for independent living. The many social and economic benefits of enabling elderly and disabled people to remain in their homes were also discussed at these conferences.

The health, social and demographic changes that I have just highlighted will have significant implications in the future. There will be a need to

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[15] The Health and Activity Limitation Survey, Statistics Canada, 1986-87.

[16] "Options: Housing for Older Canadians" conference held in Halifax, Canada, in October 1988, and sponsored by Canada Mortgage and Housing Corporation.

[17] "Housing for Saskatchewan Elderly", a Seniors' Housing Conference held in Regina, May 9-11, 1990, and sponsored by Canada Mortgage and Housing Corporation and the Saskatchewan Housing Corporation.

MAXIMIZE THE POTENTIAL OF AVAILABLE TRADITIONAL RESOURCES FOR INFORMAL SUPPORT; THERE WILL BE A NEED TO MAXIMIZE THE EFFECTIVENESS OF AVAILABLE RESOURCES FOR FORMAL SUPPORT; AND THERE WILL BE A NEED FOR SECURE AND SUPPORTIVE ENVIRONMENTS THAT CAN ENABLE ELDERLY AND DISABLED PEOPLE TO MAINTAIN OR RESTORE THEIR INDEPENDENCE.

TECHNOLOGY, INCLUDING EMERGENCY RESPONSE SYSTEMS (ERS), PROVIDES AN ENORMOUS POTENTIAL TO MEET SOME OF THE NEEDS.

STUDIES INDICATE [18] THAT MOST PEOPLE DO NOT FEAR "GROWING OLD" AS MUCH AS THEY FEAR BECOMING CHRONICALLY ILL OR FRAIL. THE ABILITY OF OLDER PEOPLE TO REMAIN FUNCTIONALLY INDEPENDENT, OR TO BE MINIMALLY DEPENDENT, CAN INFLUENCE THEIR QUALITY OF LIFE AT HOME, IN THE WORKPLACE, AND WITHIN THE COMMUNITY.

AT CANADA MORTGAGE AND HOUSING CORPORATION (CMHC), WE HAVE BEEN EXPLORING THE POTENTIAL OF EMERGENCY RESPONSE SYSTEMS FOR ENABLING SENIORS AND DISABLED PEOPLE TO MAINTAIN THEIR INDEPENDENCE AT HOME.

THE RESULTS OF OUR PRELIMINARY WORK WERE CONSOLIDATED IN THE PUBLICATION "THE STUDY OF THE EMERGENCY RESPONSE SYSTEMS FOR THE ELDERLY". THIS PUBLICATION DESCRIBES GENERICALLY THE HARDWARE AND MONITORING SERVICES THAT WERE AVAILABLE IN CANADA AS OF 1988; DISCUSSES THE POTENTIAL ROLE OF EMERGENCY RESPONSE SYSTEMS FOR OLDER CANADIANS, INCLUDING A PRELIMINARY COST-BENEFIT ANALYSIS; AND PRESENTS THE GENERIC CRITERIA THAT DEFINE APPROPRIATE TECHNOLOGY FOR OLDER PEOPLE.

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[18] "Technology and Aging in America". Congress of the United States, Office of Technology Assessment, October 1984.

FOLLOWING THIS PUBLICATION, SEVERAL PROVINCIAL AGENCIES AND PRIVATE SECTOR ORGANIZATIONS HAVE EXPRESSED INTEREST IN DEVELOPING AND DEMONSTRATING ERS WHICH INCORPORATE THE FEATURES IDENTIFIED AS BEING MOST DESIRABLE. I HAVE BROUGHT ALONG WITH ME A FEW COPIES OF THIS PUBLICATION, AND THEY ARE AVAILABLE AT THE BACK OF THIS ROOM.

CMHC ALSO WORKED WITH THE PROVINCE OF ONTARIO ON A STUDY OF EMERGENCY RESPONSE SYSTEMS. THE WORK INCLUDED DEVELOPING PERFORMANCE SPECIFICATIONS FOR A SYSTEM THAT MET THE REQUIREMENTS OF THE STUDY STEERING COMMITTEE, AND EVALUATING PRODUCTS AND SYSTEMS FROM 22 MANUFACTURERS LOCATED ACROSS CANADA, THE USA, AND WESTERN EUROPE.

I WOULD NOW LIKE TO TAKE A FEW MINUTES TO TELL YOU ABOUT WHAT I CALL "MY OWN FINDINGS" ON THE POTENTIAL OF ERS.

THE FIRST CASE IS THAT OF A YOUNG ELDERLY COUPLE WHO LIVE IN A 2-BEDROOM APARTMENT, IN A SENIORS' CONDOMINIUM DEVELOPMENT WHERE THE AVERAGE AGE OF THE RESIDENTS IS ABOUT 78 YEARS. WHILE VIEWING THEIR APARTMENT I NOTICED AN ERS DEVICE ON THE WALL, AND ASKED HOW USEFUL IT WAS FOR THEM. THE MAN TOLD ME THAT THEY WILL NEVER WANT TO LIVE IN AN INSTITUTION, AND THAT THEY WANTED TO MAKE SURE THAT THEY COULD COUNT ON ASSISTANCE IF NEEDED.

IN A VISIT TO A CONGREGATE HOUSING DEVELOPMENT, I WAS DISCUSSING THE "DO'S" AND "DO NOTS" WITH THE ADMINISTRATOR. THERE WAS A PULL-ON EMERGENCY CALL SYSTEM IN EACH APARTMENT WHICH THE RESIDENTS COULD ONLY ACTIVATE WHEN IN THE BEDROOM OR IN THE BATHROOM. THE ADMINISTRATOR NOTED THAT ONE OF THE RESIDENTS, WHO HAD A BAD HIP, HAD ONCE FALLEN DOWN ON THE FLOOR IN THE MIDDLE OF THE LIVING ROOM AND HAD NOT BEEN ABLE TO CALL FOR HELP, EVEN THOUGH THE SYSTEM HAD A TWO-WAY COMMUNICATION FEATURE, BECAUSE THE RESIDENT WAS UNABLE TO GET UP AND REACH THE ACTIVATING DEVICE ON THE WALL.

THIS SITUATION COULD HAVE BEEN PREVENTED IF AN APPROPRIATE SYSTEM HAD BEEN CHOSEN.

THE LAST CASE IS ONE OF AN OLDER SENIOR WHO LIVES ALONE IN A 3-BEDROOM SINGLE FAMILY HOUSE. THIS SENIOR WHO SOMETIMES USES A WHEELCHAIR, OR A WALKING CANE, HAS ADAPTED THE HOUSE TO HER OWN PERSONAL PHYSICAL NEEDS. SHE RECENTLY SUBSCRIBED TO AN EMERGENCY RESPONSIVE SYSTEM, AND WHEN I ASKED HER WHAT THE SYSTEM DID FOR HER, SHE RESPONDED: "IT GIVES ME CONFIDENCE, AND THIS HELPS ME TO STAY PUT".

MANY REPRESENTATIVES OF THE INDUSTRY, ERS PROGRAM MANAGERS, AND SUPPORT AND HOME CARE PROVIDERS THINK THAT ERS ARE "A WONDERFUL THING". RECENTLY, I ASKED THE DIRECTOR OF AN ERS PROGRAM [19] IF SHE KNEW WHAT HER CLIENTS THOUGHT OF ERS, AND SHE TOLD ME THIS:

- BETWEEN 10 TO 15% THINK ERS INHIBIT THEIR FREEDOM. MANY REFUSE THEM BECAUSE THEY DO NOT WANT TO GIVE THEIR HOUSE KEYS TO THE RESPONDENTS.

- BETWEEN 80 TO 90% THINK ERS ARE LIBERATORS, AND

- 95% OF THEIR RELATIVES THINK ERS ARE A GREAT IDEA.

MANY PEOPLE ALSO FEEL THAT THE AVAILABILITY OF EFFECTIVE AND AFFORDABLE ERS COULD PLAY A MAJOR ROLE IN ENABLING FRAIL OLDER PEOPLE AND PEOPLE WITH PHYSICAL AND DEVELOPMENTAL DISABILITIES TO LIVE OUTSIDE AN INSTITUTIONAL ENVIRONMENT. LAST MONTH, I DISCUSSED THIS WITH SOME ERS PROGRAM MANAGERS AND THEY TOLD ME A FEW CASE STUDIES, INCLUDING THE FOLLOWING:

In Saskatchewan [20], an 81 year old man, living alone, with angina, hypertension and arthritis, had 11 admissions to hospital during the last year prior to receiving an ERS unit. The average length of stay was less than 2 days per admission. During the following year, after having received the ERS unit, he was admitted to hospital for the same medical problems only two times. The lengths of stay were similar.

In Ottawa, Ontario [21], an 82 year old woman, with both of her legs amputated, was determined to remain in her conventional rental apartment. She lived alone. Her only daughter, who lived 400 km away, visited her twice a year. She decided to stay put in her apartment, with the help of an ERS unit and the necessary support services, and lived there for two years until she died.

From my involvement in various study committees, and my discussions with a number of program administrators and ERS users, I have come to the conclusion that "choice" plays an important role in the area of emergency response systems. It is important that a wide range of systems and products be made available to meet a wide range of needs. These choices should include a variety of designs, a variety of technical features, and a variety of costs. Manufacturers could make a substantial contribution to widen the existing range of choices not only by making different products with different features available, but also by making their products compatible with the products of other manufacturers' so that more than one type of product can be accommodated in one single monitoring station.

[19] Ms. Evelyn MacNamara from the Elizabeth-Bruyère Health Centre, Ottawa, Ontario.

[20] A case study from an evaluation of the St. Peter's Hospital Program, Melville, Saskatchewan, October, 1987 to April, 1988.

[21] A case study told by Ms. Evelyn MacNamara of the Elizabeth-Bruyère Health Centre, Ottawa, Ontario

In my discussions with program operators, I have also learned that electronic emergency response systems are generally very reliable. However, as one program manager [22] pointed out, electronic equipment can always go wrong. For example, what happens when the computer goes down, or when the telephone line does not work? It is important, therefore, that all concerned, including users and their relatives, be aware of the limitations of technology. Legal agreements are usually good tools to ensure that the parties concerned understand what ERS can and cannot do for them.

Research is also indicating the circumstances in which ERS can be useful. In 1988, Dr. Anthea Tinker told Canadians that ERS were very successful in England, but only when provided along with other things as well. In a very recent survey in Canada [23], it was found that while an ERS in itself would not keep older people in their homes longer, it could along with other support programs, help to do just that.

A recent evaluation study here in the USA among 550 seniors [24] concluded that ERS are a beneficial home care service for elderly persons who are living alone, severely functionally impaired and not socially isolated. This study also found that ERS can reduce costs of health care and improve quality of life.

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[22] Ms. Shirley Mann, Director of Volunteer Services/Manager of the ERS Program, High River Hospital and Nursing Home, High River, Alberta.

[23] Report on Electronic Emergency Response Systems, by the Pictou Council of Senior Citizens and Valley View Villa, Nova Scotia, Canada, January 4, 1990

[24] A Study of the Effects of an Emergency Alarm and Response System for the Aged, February 1980, by Sylvia Sherwood, Ph.D and John N. Morris, Ph.D and Associates. Department of Social Gerontological Research, Hebrew Rehabilitation Centre for Aged, Boston, Massachusetts.

In Canada the need and demand for ERS appears to be growing tremendously. Today, close to 25,000 people use ERS from a variety of programs and systems that are available across the country. A number of arrangements to obtain services and equipment exist including paying monthly fees for monitoring service and equipment rental, and purchasing equipment and paying monthly fees for monitoring services only.

I would now like to tell you about a number of initiatives that are taking place in Canada:

In Nova Scotia, a self-help group of 600 seniors has just completed a survey [23] among 730 seniors (which represents 10% of the total senior population of the study area) who live in a variety of housing forms both in rural and urban areas. The survey was coordinated out of a nursing home [25], and one of the three surveyors is a 79-year old senior.

The study team felt that "personal security" was one major factor affecting seniors' decisions to stay in their homes, and decided to identify the potential need and demand for electronic and/or social emergency response systems. The study originated on the hypothesis that a successful home care program should include an appropriate emergency response system.

Thirty of the 730 households interviewed said that they needed and wanted an emergency response system. This, in technical terms, means that 4.1% of the total senior population in the study area would need and want an ERS. Ninety seven households said they wanted and were willing to pay for an ERS, which, again, in technical terms means that 13.3% of the total senior population in the study area would want and be willing to pay for an ERS.

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[25] The Valley View Villa Nursing Home, Pictou, Nova Scotia, Canada.

OF THE SENIORS WHO NEEDED AND WANTED AN ERS, 73% LIVED ALONE, 47% LIVED IN RURAL AREAS, 53% LIVED IN URBAN AREAS, 57% LIVED IN THEIR OWN HOMES, AND 37% LIVED IN SENIORS' BUILDINGS. 77% FELT THAT THEY NEEDED AN ERS FOR HEALTH REASONS, THE BALANCE SAID THAT THEY NEEDED IT FOR BOTH HEALTH AND SECURITY REASONS. MANY SENIORS EXPRESSED A NEED FOR AN ERS BECAUSE THEY WERE 75 OR MORE YEARS OF AGE, A TIME OF LIFE WHEN "THEY FEEL THEY CAN EXPECT ANYTHING TO HAPPEN".

OF THE SENIORS WHO WANTED AND WERE WILLING TO PAY FOR AN ERS, 60% LIVED ALONE, 27% LIVED IN RURAL AREAS, 73% LIVED IN URBAN AREAS, 71% LIVED IN THEIR OWN HOMES, AND 23% LIVED IN SENIORS' BUILDINGS. 57% OF THE SENIORS FELT THEY WANTED AN ERS FOR HEALTH REASONS, 26% SAID THEY WANTED IT FOR COMBINED HEALTH AND SECURITY REASONS, AND 17% WANTED IT FOR SECURITY REASONS ALONE.

THE STUDY TEAM CONCLUDED THAT AN EMERGENCY RESPONSE SYSTEM SHOULD BE AN IMPORTANT AND NECESSARY COMPONENT OF A HOME CARE PROGRAM DESIGNED TO ENABLE SENIORS TO STAY IN THEIR HOMES FOR AS LONG AS POSSIBLE. SUCH A PROGRAM, THEY FEEL, COULD ALSO REDUCE THE NUMBER OF HOSPITAL DAYS CURRENTLY TAKEN BY SENIORS, AND SHOULD BE IMPLEMENTED AS QUICKLY AS POSSIBLE. THE STUDY TEAM ALSO CONCLUDED THAT AN APPROPRIATE ERS SHOULD COMBINE BOTH AN ELECTRONIC COMPONENT AND A SOCIAL COMPONENT (SUCH AS A FRIENDLY TELEPHONE CALL A DAY), AND THAT IT IS IMPORTANT THAT SUCH A SYSTEM BE AFFORDABLE FOR ALL SENIORS AND DISABLED PERSONS.

IN SASKATCHEWAN, A STUDY IS BEING UNDERTAKEN TO INVESTIGATE THE FEASIBILITY OF THE CITY OF REGINA [26], IN COLLABORATION WITH ITS FIRE DEPARTMENT, TO OFFER COMBINED EMERGENCY FIRE AND MEDICAL ALERT RESPONSE SERVICES TO ALL

CITIZENS OF THE CITY, FROM THE CHILD RUNNING OUT TO PLAY LEAVING AN APPLIANCE TURNED ON, OR PEOPLE AT RISK IN COMMERCIAL BUILDINGS, TO AN OLDER SENIOR LIVING ALONE.

ALL EMERGENCY CALLS WOULD BE MONITORED 24 HOURS A DAY BY A CENTRAL RESPONSE STATION LOCATED AT THE FIRE DEPARTMENT. WHEN A MEDICAL EMERGENCY CALL IS RECEIVED, IT WILL BE TRANSFERRED TO THE LOCAL AMBULANCE DISPATCHER'S OFFICE.

ONE OF THE ADVANTAGES OF OFFERING EMERGENCY RESPONSE SERVICES ON A UNIVERSAL BASIS IS THE POTENTIAL FOR REDUCING THE COST TO CONSUMERS DUE TO A POSSIBLE LARGER NUMBER OF SUBSCRIBERS. THE INITIAL NUMBER OF SUBSCRIBERS HAS BEEN ESTIMATED AT 3,471, INCLUDING BOTH RESIDENTIAL AND COMMERCIAL BUILDINGS (179). IT IS EXPECTED THAT THIS INNOVATIVE INITIATIVE WILL BE IMPLEMENTED IN THE FALL OF 1990.

POSSIBLE SUBSCRIBERS TO THE REGINA INITIATIVE INCLUDE 60 RESIDENTS OF AN ENRICHED HOUSING DEVELOPMENT AT PIONEER VILLAGE [27], A CONTINUUM OF CARE RETIREMENT COMMUNITY OFFERING A WIDE RANGE OF ACCOMMODATION AND SUPPORT SERVICES OPTIONS FOR SENIORS. THESE SENIORS, WHOSE AVERAGE AGE IS 81 YEARS, LIVE IN SELF-CONTAINED APARTMENTS IN TWO 2-STOREY BUILDINGS WHICH ARE INTERCONNECTED BY A SERVICE-RICH INTERNAL STREET. 33 OF THESE SENIORS PAY RENT IN BUILDING A, AND 27 HAVE PURCHASED A LIFE INTEREST IN BUILDING B. MANY OF THEM HAVE ONE OR MORE CHRONIC CONDITIONS, SOME HAVE ARTHRITIS OR DIABETES AND OTHERS HAVE DIFFICULTIES IN UNDERTAKING ONE OR MORE

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[26] Information on this initiative was provided by Mr. Arvind Bubber, Director of Revenue and Fiscal Services, City of Regina, Saskatchewan.

[27] Information on this project was provided by Mr. Ron Reavley at the Regina Pioneer Village, Saskatchewan.

ACTIVITIES OF DAILY LIVING. THIS INTEGRATED APPROACH, WHICH WILL COMBINE APPROPRIATE DESIGN, ACCESS TO COMMUNITY-BASED SUPPORT SERVICES AND EMERGENCY RESPONSE SYSTEMS, HAS AN ENORMOUS POTENTIAL TO ENABLE SENIORS TO REMAIN LIVING INDEPENDENTLY FOR AS LONG AS POSSIBLE.

EMERGENCY RESPONSE SYSTEMS ARE ALSO BECOMING VERY POPULAR IN RURAL AREAS AND SMALL TOWNS. FOR EXAMPLE, THE ST.PETER'S HOSPITAL IN MELVILLE, SASKATCHEWAN, HAS BEEN OPERATING A PROGRAM [28] FOR SENIORS WHO LIVE IN SMALL COMMUNITIES, SINCE OCTOBER 1987. MOST OF THE (225) SUBSCRIBERS ARE OLDER SENIORS [29] WHO LIVE ALONE (70%) BUT DO NOT WANT TO LIVE IN A NURSING HOME. 30% OF THE SUBSCRIBERS LIVE WITH THEIR SPOUSES, OR SOMEBODY ELSE, WHO IN MANY CASES IS ALSO FRAIL, OR HAS ONE OR MORE DISABILITIES.

THE COST OF THE HOME ERS UNITS IS $660, AND THERE IS A MONTHLY FEE OF $20 FOR MONITORING AND MAINTENANCE SERVICES. USUALLY, COMMUNITY GROUPS, SERVICE CLUBS, OR NON-PROFIT ORGANIZATIONS PROVIDE THE FUNDS TO MAKE ERS UNITS AVAILABLE TO SENIORS. THE NUMBER OF UNITS AVAILABLE, HOWEVER, IS LIMITED AND THEIR DISTRIBUTION IS BASED ON CRITERIA ESTABLISHED BY A MULTIDISCIPLINARY ASSESSMENT TEAM. THE ASSESSMENT TEAM ALLOCATES THE UNITS ON A PRIORITY BASIS TO THOSE MOST IN NEED AT THE TIME OF APPLICATION. IN ALL CASES ERS SERVICES ARE PROVIDED ALONG WITH THE NECESSARY SUPPORT SERVICES.

FOLLOWING THE FIRST SIX MONTHS OF OPERATION OF THIS PROGRAM, A QUESTIONNAIRE WAS MAILED TO ALL SUBSCRIBERS OR THEIR FAMILIES, FOR AN

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[28] Information on this program was provided by Mr. Brian Kines, Executive Director and Administrator, St.Peter's Hospital, Melville, Saskatchewan.

[29] Average age of these older seniors is 85 years.

EVALUATION. 72% OF THESE QUESTIONNAIRES WERE COMPLETED AND RETURNED. THE RESULTS INDICATED THAT THE FOLLOWING OBJECTIVES OF THE PROGRAM HAD BEEN MET:

- TO HELP ENSURE THAT AN EMERGENCY RESPONSE WILL BE PROVIDED WHEN REQUIRED AND WITHIN A REASONABLE TIME;
- TO REDUCE ANXIETY ABOUT LIVING ALONE DUE TO FEAR OF MEDICAL AND/OR ENVIRONMENTAL EMERGENCIES;
- TO ENABLE FRAIL ELDERLY AND DISABLED PERSONS TO LIVE INDEPENDENTLY IN THEIR HOMES;
- TO FACILITATE EARLY DISCHARGE TO THE COMMUNITY;
- TO REDUCE UNNECESSARY INSTITUTIONALIZATION IN HEALTH FACILITIES; AND
- TO INCREASE PEOPLE'S WILLINGNESS TO EXTEND THEMSELVES AND PERFORM NORMAL ACTIVITIES WHEN ALONE AT HOME.

ALL RESPONDENTS INDICATED THAT THEY FELT MORE SECURE AT HOME WITH ERS. WHILE MOST SUBSCRIBERS SAID THAT THEY WORE THE ACTIVATING DEVICE AT ALL TIMES, A FEW SAID THEY OCCASIONALLY REMOVED IT. THERE WERE TWO REAL EMERGENCIES, AND 29 FALSE ALARMS. THREE RESPONSES WERE INITIATED DUE TO CLIENT INACTIVITY.

IN ALBERTA, THE PROVINCIAL GOVERNMENT IMPLEMENTED AN INNOVATIVE EMERGENCY MEDICAL ALERT PROGRAM [30] ON JANUARY 1ST OF THIS YEAR. THIS PROGRAM IS

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[30] Information on this program was provided by Mrs. Betty Wilson, coordinator Agency and Equipment Approval, Seniors' Emergency Medical Alert Program, Alberta Municipal Affairs, Government of Alberta.

BEING DELIVERED THROUGH THE HOUSING DIVISION OF ALBERTA MUNICIPAL AFFAIRS. THE PRINCIPAL OBJECTIVE IS TO HELP SENIORS REMAIN LIVING INDEPENDENTLY IN THEIR HOMES FOR AS LONG AS POSSIBLE.

THE PROGRAM PROVIDES LOW AND MODERATE INCOME SENIOR RENTERS [31] WITH GRANTS OF UP TO $700 TO PURCHASE AN APPROVED MEDICAL ALERT HOME UNIT FROM AN APPROVED MEDICAL ALERT AGENCY. CONSUMERS ARE RESPONSIBLE FOR THE INSTALLATION COSTS AND THE MONITORING SERVICES AND MAINTENANCE FEES CHARGED BY THE AGENCY TO WHICH THEY SUBSCRIBE. SOME AGENCIES CHARGE $25 FOR INSTALLATION COSTS. THE AVERAGE MONTHLY FEES FOR MONITORING AND MAINTENANCE SERVICES IS $CDN 25, BUT THESE FEES RANGE BETWEEN $0-TO-32 DEPENDING ON THE LEVEL OF SUBSIDIES THAT SUBSCRIBERS RECEIVE FROM THE AGENCIES. EIGHTY PERCENT OF THE AGENCIES CHARGE THE AVERAGE MONTHLY FEE FOR MONITORING AND MAINTENANCE SERVICES.

SENIOR HOMEOWNERS, OR DISABLED PERSONS, MAY APPLY FOR GRANT MONEY UNDER ONE OF TWO OTHER NEW PROGRAMS, "SENIORS INDEPENDENT LIVING PROGRAM" OR "HOME ADAPTATION PROGRAM", AND IF ELIGIBLE, SOME OF THEIR GRANT MONEY UNDER THESE PROGRAMS MAY BE USED TOWARDS THE PURCHASE OF AN APPROVED MEDICAL ALERT UNIT.

THE PROGRAM ALSO PROVIDES ONE-TIME GRANTS OF UP TO $CDN 20,000 TO HELP NEW OR EXISTING NON-PROFIT AGENCIES ESTABLISH OR EXPAND EMERGENCY MEDICAL ALERT NETWORKS. NON-PROFIT OR COMMERCIAL AGENCIES WISHING TO PARTICIPATE AS AN APPROVED SUPPLIER OF MEDICAL ALERT EQUIPMENT AND SERVICES MUST MEET ESTABLISHED PROGRAM GUIDELINES.

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[31] Those people 65 years of age or older, or widows/widowers 55 years of age or older, who live in rental accommodation in Alberta for at least 9 months of the year, and who receive Alberta Assured Income Plan benefits or have a household income of $CDN 25,000 or less for the previous calendar year.

As of the 25th of April of this year, 700 applications had been approved, and close to 600 Emergency Medical Alert units were in use.

Between 1,500 to 2,000 units are expected to be in service under this program by the end of 1990. While it is expected that 1,000 additional units a year will be approved in the initial subsequent years, future demand may stabilize as the needs of the target group are being met.

Most subscribers under this program are older seniors living in the community in private apartments, or in the homes of their children. There are a few who live in seniors' buildings where meals and supervision services are provided. 40% live in rural areas and 60% live in urban centres.

In most cases ERS and other support services complement each other to enable seniors to live independently. Many relatives have encouraged their seniors to get an ERS unit because of the potential benefits for both subscribers and their relatives.

I would now like to tell you about an innovative project being undertaken in Montreal, "The Shelter Housing Project" [32]; but before I do that, let me give you some background on the issues that this project is addressing.

Changes in the ability of many seniors to maintain independent lifestyles in rent-geared-to-income housing [33] are having significant implications for the managers of seniors' buildings and portfolio administrators across Canada. Activity limitation, inappropriate physical environments, and in

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[32] Information on this project was provided by Ms. Danielle Maltais and Ms. Francine Trickey of the Department of Community Services at the Montreal General Hospital, Montreal.

[33] Includes both non-profit and public housing.

MANY CASES LACK OF ACCESS TO COMMUNITY-BASED SERVICES ARE INCREASING THE RISKS FOR MANY SENIORS OF HAVING TO MOVE INTO AN INSTITUTIONAL ENVIRONMENT.

FROM RECENT STUDIES IN CANADA [34], AS WELL AS FROM SEVERAL DISCUSSIONS AT A SERIES OF SENIORS' CONFERENCES BEING HELD ACROSS THE COUNTRY [35], IT IS BECOMING APPARENT THAT MANY FRAIL SENIORS STILL PREFER TO REMAIN LIVING INDEPENDENTLY IN THEIR HOMES FOR AS LONG AS POSSIBLE, AND THAT THIS IS POSSIBLE IF THEY HAVE THE NECESSARY SUPPORT. IN ADDITION, THERE IS A STRONG FEELING THAT LIVING INDEPENDENTLY IN RENT-GEARED-TO-INCOME HOUSING CAN BE A LESS COSTLY AND MORE WELCOME ALTERNATIVE TO LIVING IN INSTITUTIONS FOR MANY SENIORS. THE PROBLEM, HOWEVER, IS THAT MUCH OF THE EXISTING STOCK OF THIS TYPE OF HOUSING IS NOT DESIGNED TO ADDRESS THE CHANGING NEEDS OF SENIORS AS THEY BECOME OLDER AND MORE FRAIL. THE PROPORTION OF OLDER SENIORS IN RENT-GEARED-TO-INCOME HOUSING IS GROWING SIGNIFICANTLY - LENDING URGENCY TO THE NEED TO TACKLE THIS ISSUE.

"THE SHELTER HOUSING PROJECT" IS A PILOT DEMONSTRATION DESIGNED TO ADDRESS THE PARTICULAR NEEDS OF A GROUP OF OLDER SENIORS LIVING IN AN EIGHT-STOREY, 10-YEAR OLD, RENT-GEARED-TO-INCOME BUILDING CONTAINING 77 SELF-CONTAINED APARTMENTS [36]. IT IS A COLLABORATIVE EFFORT BETWEEN L'OFFICE MUNICIPALE D'HABITATION DE MONTREAL, THE DEPARTMENT OF COMMUNITY SERVICES AT THE MONTREAL GENERAL HOSPITAL, AND THE LOCAL COMMUNITY SERVICE CENTRE NOTRE DAME DE GRACE - MONTREAL WEST.

[34] a) Housing and the Health of the Elderly by the Metropolitan Toronto District Health Council, March 1988; b) Habitat-A National Seniors Housing Consultation by One Voice, the Canadian Seniors Network, Ottawa, 1989.

[35] Provincial and territorial seniors' conferences being held in each province and territory across Canada between April and September of 1990, co-sponsored by Canada Mortgage and Housing Corporation and the respective Provincial and Territorial Housing Agencies.

[36] Commonly known as the Monkland Residence.

THE PRINCIPAL OBJECTIVE OF THIS 2-YEAR PILOT PROJECT IS TO TEST AND DEMONSTRATE EACH OF THE FOLLOWING STRATEGIES, AND TO FIND OUT HOW THE OVERALL INTERVENTION CAN HELP SENIORS LIVE INDEPENDENTLY IN THEIR HOMES WHILE MAINTAINING A HIGH QUALITY OF LIFE:

STRATEGY ONE: PROVIDING AN ELECTRONIC EMERGENCY RESPONSE SYSTEM PROGRAM FOR A SELECTED GROUP OF FRAIL ELDERLY RESIDENTS WHO LIVE ALONE, HAVE FUNCTIONAL DIFFICULTIES IN UNDERTAKING ONE OR MORE ACTIVITIES OF DAILY LIVING, HAVE MEDICAL PROBLEMS WHICH CAN CAUSE A CRISIS (SUCH AS A BAD HEART, DIABETES OR SUDDEN DIZZINESS), OR FEEL INSECURE;

STRATEGY TWO: MAKING THE BUILDING PHYSICALLY ACCESSIBLE TO ALL SENIORS AND IMPLEMENTING A HOME ADAPTATION PROGRAM FOR THOSE SENIORS WHO HAVE FUNCTIONAL DIFFICULTIES IN UNDERTAKING ONE OR MORE ACTIVITIES OF DAILY LIVING;

STRATEGY THREE: REDEFINING THE TRADITIONAL ROLE OF THE HOUSING MANAGER AS "MORE OF A SUPPORTIVE MANAGER", TO ENSURE THAT THE NEEDS OF SENIORS ARE MET EITHER BY THE FORMAL OR THE INFORMAL SUPPORT NETWORKS. THE NEW RESPONSIBILITIES OF THIS MANAGER INCLUDE PLAYING THE ROLE OF A PRIME RESPONDENT IN THE EMERGENCY RESPONSE SERVICE PROGRAM.

STRATEGY FOUR: ENSURING THAT SENIORS HAVE ACCESS TO COMMUNITY-BASED SUPPORT SERVICES; AND

STRATEGY FIVE: FACILITATING A BETTER INTERACTION BETWEEN SENIORS LIVING IN THE BUILDING AND SENIORS LIVING IN THE

COMMUNITY, TO MAXIMIZE THE EFFORTS OF AVAILABLE RESOURCES, AND TO SUPPORT SELF-HELP AMONG SENIORS.

THIS PILOT PROJECT WAS IMPLEMENTED IN NOVEMBER OF 1989. FOLLOWING AN INITIAL ASSESSMENT OF THE NEEDS OF ALL SENIORS INVOLVED, ELECTRONIC EMERGENCY RESPONSE UNITS WERE INSTALLED IN 32 APARTMENTS, MINOR HOME ADAPTATIONS WERE MADE IN 13 OF THESE APARTMENTS, AND A COMMUNITY ROOM WAS MADE AVAILABLE IN THE BUILDING TO FACILITATE ACCESS TO COMMUNITY BASED SERVICES FOR ALL SENIORS INVOLVED. THE AVERAGE AGE OF THOSE WHO RECEIVED AN ELECTRONIC EMERGENCY RESPONSE UNIT IS 84 YEARS.

THE COST OF THE ERS PROGRAM IS BEING SUBSIDIZED BY L'OFFICE MUNICIPALE D'HABITATION DE MONTREAL. THE COST OF INSTALLING A HOME UNIT IS $25. A $20 MONTHLY FEE COVERS THE COSTS OF LEASING A HOME UNIT, RECEIVING EMERGENCY RESPONSE SERVICES AND MAINTENANCE, AND RECEIVING A FRIENDLY CALL ONCE A WEEK.

THE COSTS OF HOME ADAPTATIONS RANGED BETWEEN $22 AND $668. ADAPTATIONS INCLUDED SMALL THINGS SUCH AS PROVIDING A BATHTUB TRANSFER-SEAT, OR INSTALLING NEW LOW SHELVES IN A KITCHEN.

A PRELIMINARY EVALUATION OF THIS PILOT PROJECT WAS MADE JUST LAST MONTH AND A REPORT IS EXPECTED FOR LATE SUMMER OF THIS YEAR. HOWEVER, A PREVIEW OF THIS EVALUATION (BY A MEMBER OF THE EVALUATION TEAM) INDICATES THE TWO FOLLOWING RESULTS:

RESULT ONE: BETWEEN NOVEMBER OF 1989 AND MARCH OF 1990, THE HOUSING MANAGER RECEIVED A TOTAL OF 16 EMERGENCY CALLS. OUT OF THESE, 5 WERE REAL EMERGENCIES; 5 WERE FALSE ALARMS; AND 6 WERE FROM PEOPLE WHO NEEDED SOME HELP, BUT NOT URGENTLY.

RESULT TWO: IT APPEARS THAT "THE FEELING OF SECURITY AMONG THOSE WHO RECEIVED AN ELECTRONIC EMERGENCY RESPONSE UNIT HAS REALLY INCREASED".

IN OTTAWA, ONTARIO, THE ELIZABETH-BRUYÈRE HEALTH CENTRE HAS BEEN OPERATING A VERY SUCCESSFUL EMERGENCY RESPONSE PROGRAM [37] FOR THE LAST THREE YEARS. THE NUMBER OF SUBSCRIBERS TO THIS PROGRAM HAS AND CONTINUES TO INCREASE VERY QUICKLY. FOR EXAMPLE, THE NUMBERS INCREASED FROM 100, TWO YEARS AGO, TO 450 TODAY; AND THIS IS EXPECTED TO INCREASE TO 600 BY NEXT YEAR. WHILE MOST OF THE SUBSCRIBERS TO THIS PROGRAM LIVE IN THE OTTAWA AREA, THERE ARE ALSO MANY WHO LIVE IN NEARBY TOWNS, AND SOME (10%) WHO LIVE IN RURAL AREAS. MOST OF THE REFERRALS FOR ERS COME FROM THE OFFICE OF THE HOME CARE PROGRAM.

THE MAJORITY OF THE SUBSCRIBERS TO THIS PROGRAM (75%) ARE FRAIL WOMEN AGED BETWEEN 80 AND 85 YEARS, BUT THERE ARE ALSO DISABLED PEOPLE IN THEIR EARLY 20's (10-15%), AND OLDER SENIORS IN THEIR MID 90's. THE AGE RANGE OF ADULT SUBSCRIBERS VARIES BETWEEN 40 AND 97 YEARS.

ABOUT TWENTY PERCENT OF THE SUBSCRIBERS LIVE IN SINGLE FAMILY HOMES WITH RELATIVES, SEVENTY PERCENT LIVE IN SENIORS' HOUSING AND RESIDENTIAL CARE HOMES, AND CLOSE TO 5% LIVE IN EMERGENCY HOUSING FOR FAMILIES, AND IN HOMES FOR EMOTIONALLY DISABLED CHILDREN. IN THE LATTER CASE, CARE ATTENDANTS ARE THE ONES WHO WEAR THE ACTIVATING DEVICE.

THE ELIZABETH-BRUYÈRE HEALTH CENTRE PURCHASES EMERGENCY RESPONSE HOME UNITS FROM A SUPPLIER AT AN AVERAGE UNIT PRICE OF $750, AND LEASES THEM TO SUBSCRIBERS.

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[37] Information on this program was provided by Ms. Evelyn MacNamara Program Manager at the Elizabeth-Bruyère Health Centre, Ottawa, Ontario.

Twenty-five percent of the subscribers use two-way-voice units, and seventy-five percent use basic units. Monitoring services are provided from a Central Monitoring Station located at the centre. The Ontario Ministry of Community and social services funds 70% of the program's operating costs, excluding purchase of equipment and depreciation. Subscribers pay a $25 fee for installation of the home unit; and a $35 monthly fee to cover the costs of leasing and maintaining the home unit, and receiving the emergency response services. Usually, community groups, service clubs, or non-profit organizations provide funds to make ER services available to subscribers. Some 23 volunteers help in installing home units, testing equipment, making friendly calls every month to subscribers, and filing and processing correspondence.

During the three years of operation of this program, there have been a total of 4, 367 false alarms, and a total of 531 real emergencies (as of the end of April 1990). This indicates that just under 11% of the total number of calls have been real emergencies. Feedback received from the manager of this program indicates that ERS help many people maintain their independence, when provided along with the necessary support services.

In New Westminster, British Columbia, the Queen's Park Hospital offers a community based non-profit program [38] designed to enable a number of people to remain living independently and safely in their homes. Subscribers to the program include individuals with health problems, elderly people, disabled persons, those recently discharged from the hospital and those who live alone.

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[38] Data on this program was provided by Mrs. Kathie Taylor, Program Manager of the ERS program, Pacific Health Care Society at Queen's Park Hospital, New Westminster, B.C.

THE PROGRAM SERVES A CATCHMENT AREA WHERE 20% OF THE POPULATION IS ALREADY 65 YEARS OF AGE OR OLDER.

AS OF THE END OF APRIL OF 1990, THE PROGRAM HAD 137 SUBSCRIBERS WHOSE AGE RANGED BETWEEN 52 AND 101 YEARS. CLOSE TO NINETY PERCENT WERE WOMEN, MOSTLY WIDOWS, WHO LIVED IN APARTMENT COMPLEXES AND SENIORS' RESIDENCES. THE OTHER TEN PERCENT WERE MEN. ABOUT 40% OF THESE MEN LIVED WITH THEIR SPOUSES OR FAMILY MEMBERS.

THE CENTRAL MONITORING STATION AT QUEEN'S PARK HOSPITAL RECEIVES ABOUT 65 CALLS PER MONTH. 45 OF THESE CALLS ARE USUALLY ACCIDENTAL, 11 ARE NON-EMERGENCY CALLS, 4 ARE INACTIVITY CALLS, AND 5 ARE REAL EMERGENCIES. ABOUT 60% OF THE EMERGENCY CALLS ARE CAUSED BY FALLS; THE REST ARE USUALLY CAUSED BY A MEDICAL EMERGENCY, SUCH AS A HEART ATTACK. THE ERS PROGRAM HAS MADE IT POSSIBLE TO BRING PEOPLE TO THE HOSPITAL WITHIN TEN MINUTES FOLLOWING AN EMERGENCY CALL.

QUEEN'S PARK HOSPITAL PURCHASES BASIC UNITS AND TWO-WAY VOICE UNITS FROM A SUPPLIER AT AN AVERAGE PRICE OF $750, AND LEASES THEM TO SUBSCRIBERS. SUBSCRIBERS PAY A MONTHLY FEE OF $23 FOR THE BASIC UNIT, AND $30 FOR THE TWO-WAY VOICE UNITS. THESE FEES COVER THE COSTS OF OVERHEAD, AND EQUIPMENT RENTAL AND MAINTENANCE.

IN ALBERTA, THE HIGH RIVER HOSPITAL AND NURSING HOME HAS BEEN OPERATING A SUCCESSFUL ERS PROGRAM [39] SINCE APRIL OF 1983. THIS PROGRAM CURRENTLY SERVES 45 ELDERLY PEOPLE AND DISABLED PERSONS WHO LIVE INDEPENDENTLY IN THEIR HOMES.

[39] Information on this program was provided by Ms. Shirley Mann, Director of Volunteer Services/Manager of the ERS Program, High River Hospital & Nursing Home, High River, Alberta.

MOST OF THESE PEOPLE ARE OLDER SENIORS WHO LIVE ABSOLUTELY ALONE (80%), ARE AFRAID OF FALLING, HAVE HAD A HEART ATTACK OR STROKE, ARE PARTIALLY PARALYZED OR ARE IN WHEELCHAIRS. FIFTY PERCENT ARE WOMEN AND 50% ARE MEN. THE MAJORITY (90%) LIVE IN SINGLE FAMILY HOUSES, SOME (5%) LIVE IN PRIVATE RENTAL APARTMENTS, AND A FEW LIVE IN SENIORS' HOUSING.

THROUGH DAY-TO-DAY OBSERVATION AND EXPERIENCE, THE MANAGER OF THIS PROGRAM HAS FOUND THAT ERS PROVIDE MANY BENEFITS INCLUDING: A) REDUCING ANXIETY, AND INCREASING CONFIDENCE, AMONG BOTH SUBSCRIBERS AND THEIR RELATIVES; B) REDUCING THE NUMBER OF VISITS BY SUBSCRIBERS TO THE DOCTOR; C) RELIEVING THE NEED FOR ADULT CHILDREN TO SEND THEIR PARENTS TO A NURSING HOME; AND D) SAVING MANY LIVES THROUGH TIMELY AND APPROPRIATE EMERGENCY RESPONSES.

THE CENTRAL MONITORING STATION IS LOCATED AT THE HIGH RIVER HOSPITAL. THE HOSPITAL PURCHASES ERS HOME UNITS FROM SUPPLIERS AT A PRICE RANGING BETWEEN $450 AND $750. SUBSCRIBERS PAY $20 FOR INITIAL INSTALLATION COSTS, AND A MONTHLY FEE OF $15 TO COVER THE COSTS OF RENTING THE HOME UNITS AND RECEIVING MAINTENANCE AND MONITORING SERVICES.

ACROSS CANADA, THE INTEREST IN ERS BY GOVERNMENT AGENCIES AND NON-PROFIT COMMUNITY-BASED ORGANIZATIONS IS GROWING, AND SEVERAL NEW INITIATIVES ARE EMERGING. FOR EXAMPLE, IN THE REGIONAL MUNICIPALITY OF YORK, IN ONTARIO, A COMMITTEE REPRESENTING THE LOCAL HOSPITAL, HOUSING OPERATORS, ELDERLY AND DISABLED CONSUMERS, AND THE SENIORS CITIZEN'S DIVISION OF THE REGIONAL MUNICIPALITY, HAVE BEEN WORKING TOGETHER FOR THE LAST YEAR TO DESIGN, DEVELOP AND IMPLEMENT AN ERS PROGRAM [40] FOR THE ENTIRE REGION.

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[40] Information on this program was provided by Mr. Glen Davies, Director of the Senior Citizen's Division of the Regional Municipality of York, Ontario.

THE REGIONAL MUNICIPALITY OF YORK, WHICH IS PLAYING THE LEAD ROLE ON THE COMMITTEE, IS LOOKING FOR A COMMERCIAL PARTNER TO DELIVER THIS PROGRAM. THIS PARTNER WOULD BE RESPONSIBLE FOR ESTABLISHING A LOCAL MONITORING STATION, SUPPLYING THE NECESSARY EQUIPMENT AND STAFFING, INSTALLING HOME UNITS, AND MAKING AVAILABLE EMERGENCY RESPONSE SERVICES AND ONGOING MAINTENANCE SERVICES. THE MUNICIPALITY WOULD MAKE REFERRALS THROUGH ITS NETWORKS, PROVIDE COORDINATION AND FOLLOW UP SERVICES, AND IN COOPERATION WITH THE ONTARIO MINISTRY OF COMMUNITY AND SOCIAL SERVICES, WOULD PROVIDE FUNDS TO ELIGIBLE SUBSCRIBERS TO COVER THE COSTS OF INSTALLING THE HOME UNITS, PURCHASING OR RENTING THE HOME UNITS, AND RECEIVING EMERGENCY RESPONSE SERVICES AND MAINTENANCE SERVICES.

THE MUNICIPALITY IS CURRENTLY REVIEWING A NUMBER OF PROPOSALS FROM SEVERAL COMPANIES, AND IT EXPECTS TO BE ABLE TO IMPLEMENT THE PROGRAM SOMETIME IN AUGUST OF THIS YEAR. IT IS EXPECTED THAT CLOSE TO 200 ERS UNITS WOULD BE IN OPERATION IN THE FIRST YEAR. THE TOTAL UPTAKE FOR THE FIRST 5 YEARS IS EXPECTED TO BE 2,000 UNITS.

COSTS FOR SERVICES AND EQUIPMENT UNDER THIS PROGRAM ARE VERY PRELIMINARY AT THE MOMENT. HOWEVER, IT IS ESTIMATED THAT THOSE WISHING TO PURCHASE A HOME UNIT WOULD PAY A ONE-TIME SUM OF $800 FOR IT, AND THOSE WISHING TO LEASE A HOME UNIT WOULD PAY A MONTHLY FEE OF BETWEEN $23 AND $24. EMERGENCY RESPONSE SERVICES WOULD BE AVAILABLE FOR BOTH BUYERS AND RENTERS AT A MONTHLY FEE OF $20.

THE CANADIAN AUTOMATED BUILDING ASSOCIATION IN COLLABORATION WITH SEVERAL OTHER ORGANIZATIONS, IS UNDERTAKING A "STUDY ON APPLICATIONS OF BUILDING AUTOMATION FOR ELDERLY AND DISABLED PERSONS". THIS STUDY WILL IDENTIFY OPPORTUNITIES FOR CANADIAN FIRMS TO PARTICIPATE IN THE DEVELOPMENT AND MARKETING OF NEW TECHNOLOGIES WHICH RESPOND TO THE NEEDS OF DISABLED AND ELDERLY PERSONS AND POTENTIALLY COULD BE ADAPTED TO THE BUILDING MARKET AT LARGE. THE OBJECTIVES INCLUDE: A) TO ASSESS THE NATURE AND SIZE OF THE POTENTIAL MARKET IN TERMS OF THE NEEDS OF THE CURRENT AND FUTURE ELDERLY AND DISABLED POPULATION THAT COULD BENEFIT FROM AUTOMATED BUILDINGS TECHNOLOGIES; B) TO IDENTIFY APPROPRIATE CONCEPTUAL AND TECHNOLOGICAL RESPONSES TO THE NEEDS OF ELDERLY AND DISABLED PEOPLE; AND C) TO IDENTIFY THE SOCIAL AND ECONOMIC BENEFITS AND COSTS OF BUILDING AUTOMATION FOR ELDERLY AND DISABLED PERSONS.

INTEGRATED APPROACHES TO BUILDING AUTOMATION INCLUDING EMERGENCY RESPONSE SYSTEM FUNCTIONS, HAVE POTENTIAL FOR FURTHER HELPING MANY SENIORS AND DISABLED PERSONS LIVE INDEPENDENTLY IN THEIR HOMES. THESE APPROACHES, WITH GREATER FACILITIES FOR PASSIVE ACTIVATION, COULD ENABLE THEM TO UNDERTAKE THE ACTIVITIES OF DAILY LIVING AND TO MONITOR MANY OTHER FUNCTIONS IN THEIR HOMES WITH INCREASED SAFETY, COMFORT, SECURITY AND CONVENIENCE.

TO SUMMARIZE, SIGNIFICANT SOCIO-DEMOGRAPHIC CHANGES HAVE OCCURRED IN CANADA OVER THE LAST 35 YEARS. THESE CHANGES HAVE IMPLICATIONS FOR CANADIANS IN THE FUTURE. IF CURRENT TRENDS CONTINUE, THERE WILL BE AN INCREASED NEED TO MAXIMIZE THE EFFECTIVENESS OF AVAILABLE RESOURCES IN ORDER TO ADDRESS THE NEEDS FOR FORMAL AND INFORMAL SUPPORT OF OLDER SENIORS AND DISABLED PERSONS.

FROM THE INFORMATION PRESENTED IN THIS PAPER, IT IS APPARENT THAT MOST OLDER SENIORS AND DISABLED PERSONS PREFER TO REMAIN LIVING INDEPENDENTLY IN THEIR HOMES FOR AS LONG AS POSSIBLE, INSTEAD OF MOVING INTO INSTITUTIONAL ENVIRONMENTS. THIS IS POSSIBLE IF THEY HAVE THE NECESSARY SUPPORT. IT IS ALSO APPARENT THAT EMERGENCY RESPONSE SYSTEMS (ERS) ARE PLAYING, AND WILL CONTINUE TO PLAY, AN IMPORTANT ROLE IN ENABLING MANY SENIORS AND DISABLED PERSONS TO MAINTAIN THEIR INDEPENDENCE.

ACROSS CANADA, THE INTEREST IN EFFECTIVE AND AFFORDABLE ERS IS GROWING RAPIDLY, AND A VARIETY OF INNOVATIVE INITIATIVES ARE EMERGING. MOST OF THESE INITIATIVES COMBINE THE REASSURANCE OF EMERGENCY RESPONSE SYSTEMS WITH APPROPRIATE PHYSICAL ENVIRONMENTS AND ACCESSIBILITY TO THE NECESSARY COMMUNITY BASED SUPPORT SERVICES. THE OBJECTIVE IS TO HELP OLDER SENIORS AND DISABLED PERSONS REMAIN LIVING INDEPENDENTLY IN THEIR HOMES FOR AS LONG AS POSSIBLE.

THANK YOU VERY MUCH.